

FUSION WELDING METHOD AND WELDED ARTICLE

ABSTRACT

5 A fusion welding method is provided for fusion welding at juxtaposed interface surfaces a first member, for example made of a first metal based on at least one of Ru, Rh, Pd, and Pt, with a second member made of a second metal, for example a high temperature alloy based on at least one of Fe, Co, and Ni, including at least one identified element, for example Al, that can form a continuous layer of a brittle intermetallic compound with the first metal that is free of such element. With the interface surfaces
10 disposed in contact, energy is generated at the interface surfaces in a combination of an amount and for a first time selected to be sufficient to heat the interface surfaces to a fusion welding temperature. However, the first time is less than a second time that enables formation at the fusion welding temperature of the continuous layer of the brittle intermetallic compound at the interface surfaces. A welded article is provided with a
15 fusion weld free of such continuous layer of the brittle intermetallic compound.